

WHAT IS CLAIMED IS:

1. A soya fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of said soya fiber particulate has a size in a range of about 0.01 microns to about 35 microns.
2. The soya fiber particulate of claim 1, wherein at least about 90% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 75 microns.
3. The soya fiber particulate of claim 2, wherein at least about 80% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 65 microns.
4. The soya fiber particulate of claim 3, wherein at least about 70% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 55 microns.
5. The soya fiber particulate of claim 4, wherein at least about 60% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 45 microns.
6. The soya fiber particulate of claim 1, wherein at least about 40% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 25 microns.
7. The soya fiber particulate of claim 6, wherein at least about 30% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 15 microns.

8. The soya fiber particulate of claim 7, wherein at least about 20% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 10 microns.

9. The soya fiber particulate of claim 8, wherein at least about 10% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 5 microns.

10. The soya fiber particulate of claim 1, wherein said soya fiber particulate has a median particle size in a range of about 10 microns to about 20 microns.

11. The soya fiber particulate of claim 1, wherein said soya fiber particulate remains stable for at least 6 months.

12. The soya fiber particulate of claim 11, wherein said soya fiber particulate remains stable for at least 7 months.

13. The soya fiber particulate of claim 12, wherein said soya fiber particulate remains stable for at least 8 months.

14. The soya fiber particulate of claim 13, wherein said soya fiber particulate remains stable for at least 9 months.

15. The soya fiber particulate of claim 14, wherein said soya fiber particulate remains stable for at least 10 months.

16. The soya fiber particulate of claim 15, wherein said soya fiber particulate remains stable for at least 11 months.

17. The soya fiber particulate of claim 16, wherein said soya fiber particulate remains stable for at least 1 year.

18. The soya fiber particulate of claim 1, wherein said soya fiber particulate has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

19. The soya fiber particulate of claim 18, wherein said soya fiber particulate has a sedimentation of less than about 4% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

20. The soya fiber particulate of claim 19, wherein said soya fiber particulate has a sedimentation of less than about 3% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

21. The soya fiber particulate of claim 20, wherein said soya fiber particulate has a sedimentation of less than about 2% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

22. The soya fiber particulate of claim 21, wherein said soya fiber particulate has a sedimentation of less than about 1% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

23. The soya fiber particulate of claim 22, wherein said soya fiber particulate has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

24. The soya fiber particulate of claim 1, wherein said soya is selected from the group consisting of whole soybeans, full fat soy flour, full fat soy flakes, partially defatted soy flour, partially defatted soy flakes, defatted soy flour, defatted soy flakes, refatted soy flour, refatted soy flakes, soy protein concentrate and mixtures thereof.

25. A product comprising the soya fiber particulate of claim 1, wherein said product is selected from the group consisting of:

- (a) beverage;
- (b) dry mix;
- (c) milk product;
- (d) simulated milk product;
- (e) tofu;
- (f) miso;
- (g) topping;
- (h) infant food;
- (i) dessert;
- (j) snack;
- (k) flour product;
- (l) meat food product;
- (m) simulated meat food product; and
- (n) pet food product.

26. A product comprising the soya fiber particulate of claim 1, wherein said product is soymilk.

27. A product comprising the soya fiber particulate of claim 1, wherein said product is a simulated milk product combined with a milk product.

28. A product comprising the soya fiber particulate of claim 1, wherein said product is a simulated meat food product combined with a meat food product.

29. The product of claim 25, wherein said product remains stable for at least 6 months.
30. The product of claim 29, wherein said product remains stable for at least 7 months.
31. The product of claim 30, wherein said product remains stable for at least 8 months.
32. The product of claim 31, wherein said product remains stable for at least 9 months.
33. The product of claim 32, wherein said product remains stable for at least 10 months.
34. The product of claim 33, wherein said product remains stable for at least 11 months.
35. The product of claim 34, wherein said product remains stable for at least 1 year.
36. The product of claim 25, wherein said product has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
37. The product of claim 36, wherein said product has a sedimentation of less than about 4% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
38. The product of claim 37, wherein said product has a sedimentation of less than about 3% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

39. The product of claim 38, wherein said product has a sedimentation of less than about 2% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

40. The product of claim 39, wherein said product has a sedimentation of less than about 1% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

41. The product of claim 40, wherein said product has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

42. The product of claim 25, wherein said soya is selected from the group consisting of whole soybeans, full fat soy flour, full fat soy flakes, partially defatted soy flour, partially defatted soy flakes, defatted soy flour, defatted soy flakes, refatted soy flour, refatted soy flakes, soy protein concentrate and mixtures thereof.

43. A process for preparing the soya fiber particulate of claim 1, wherein said process comprises:

(a) grinding a dehulled soya to yield a soya fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of said soya fiber particulate has a size in a range of about 0.01 microns to about 35 microns;

(b) pasteurizing and/or sterilizing said soya fiber particulate;
and

(c) homogenizing said soya fiber particulate to yield a soya fiber particulate.

44. The process of claim 43, wherein said soya is selected from the group consisting of whole soybeans, full fat soy flour, full fat soy flakes, partially defatted soy flour, partially defatted soy flakes, defatted soy flour, defatted soy flakes, refatted soy flour, refatted soy flakes, soy protein concentrate and mixtures thereof.

45. The process of claim 43, wherein said grinding comprises wet grinding.

46. The process of claim 43, wherein said grinding comprises dry grinding.

47. The process of claim 43, wherein said pasteurizing and/or sterilizing comprises heating said soya fiber particulate to a temperature in a range of about 50°C to about 175°C for at least 4 seconds.

48. The process of claim 47, wherein said pasteurizing and/or sterilizing comprises heating said soya fiber particulate to a temperature in a range of about 65°C to about 155°C for at least 4 seconds.

49. The process of claim 43, wherein said grinding yields soya fiber particulate of a median particle size in a range of about 10 microns to about 20 microns.

50. The process of claim 43, wherein said grinding yields soya fiber particulate wherein at least about 40% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 25 microns.

51. The process of claim 50, wherein said grinding yields soya fiber particulate wherein at least about 30% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 15 microns.

52. The process of claim 51, wherein said grinding yields soya fiber particulate wherein at least about 20% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 10 microns.

53. The process of claim 52, wherein said grinding yields soya fiber particulate wherein at least about 10% of said soya fiber particulate has a particle size in a range of about 0.01 microns to about 5 microns.

54. The process of claim 43, wherein said grinding is performed by a bead mill or a ball mill.

55. The process of claim 43, wherein said fiber particulate is dehydrated.

56. The process of claim 55, wherein said fiber particulate is spray-dried.

57. The soya fiber particulate made by the process of any of claims 43-56.

58. A product comprising the soya fiber particulate of claim 57, wherein said product is selected from the group consisting of:

- (a) beverage;
- (b) dry mix;
- (c) milk product;
- (d) simulated milk product;
- (e) tofu;
- (f) miso;
- (g) topping;

- (h) infant food;
- (i) dessert;
- (j) snack;
- (k) flour product;
- (l) meat food product;
- (m) simulated meat food product; and
- (n) pet food product.

59. A product comprising the soya fiber particulate of claim 57, wherein said product is soymilk.

60. A product comprising the soya fiber particulate of claim 57, wherein said product is a simulated milk product combined with a milk product.

61. A product comprising the soya fiber particulate of claim 57, wherein said product is a simulated meat food product combined with a meat food product.

62. The product of claim 58, wherein said product remains stable for at least 6 months.

63. The product of claim 62, wherein said product remains stable for at least 7 months.

64. The product of claim 63, wherein said product remains stable for at least 8 months.

65. The product of claim 64, wherein said product remains stable for at least 9 months.

66. The product of claim 65, wherein said product remains stable for at least 10 months.

67. The product of claim 66, wherein said product remains stable for at least 11 months.
68. The product of claim 67, wherein said product remains stable for at least 1 year.
69. The product of claim 58, wherein said product has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
70. The product of claim 69, wherein said product has a sedimentation of less than about 4% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
71. The product of claim 70, wherein said product has a sedimentation of less than about 3% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
72. The product of claim 71, wherein said product has a sedimentation of less than 2% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
73. The product of claim 72, wherein said product has a sedimentation of less than about 1% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
74. The product of claim 73, wherein said product has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.
75. The product of claim 58, wherein said soya is selected from the group consisting of whole soybeans, full fat soy flour, full fat soy flakes, partially defatted soy flour,

partially defatted soy flakes, defatted soy flour, defatted soy flakes, refatted soy flour, refatted soy flakes, soy protein concentrated and mixtures thereof.

76. A grain fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of said grain fiber particulate has a size in a range of about 0.01 microns to about 35 microns.

77. The grain fiber particulate of claim 76, wherein said grain is selected from the group consisting of flax, sunflower, rice, canola, corn, wheat, rapeseed, and lupin.

78. The grain fiber particulate of claim 76, wherein said grain is selected from the group consisting of full fat grains, full fat grain flour, full fat grain flakes, partially defatted grain flour, partially defatted grain flakes, defatted grain flour, defatted grain flakes, refatted grain flour, refatted grain flakes, grain protein concentrate and mixtures thereof.

79. The grain fiber particulate of claim 76, wherein said grain fiber particulate has a median particle size in a range of about 10 microns to about 20 microns.

80. The grain fiber particulate of claim 76, wherein said grain fiber particulate remains stable for at least 6 months.

81. The grain fiber particulate of claim 80, wherein said grain fiber particulate remains stable for at least 1 year.

82. The grain fiber particulate of claim 76, wherein said grain fiber particulate has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

83. The grain fiber particulate of claim 82, wherein said grain fiber particulate has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

84. A product comprising the grain fiber particulate of claim 76, wherein said product is selected from the group consisting of:

- (a) beverage;
- (b) dry mix;
- (c) milk product;
- (d) simulated milk product;
- (e) tofu;
- (f) miso;
- (g) topping;
- (h) infant food;
- (i) dessert;
- (j) snack;
- (k) flour product;
- (l) meat food product;
- (m) simulated meat food product; and
- (n) pet food product.

85. The product of claim 84, wherein said grain is selected from the group consisting of flax, sunflower, rice, canola, corn, wheat, rapeseed, and lupin.

86. The product of claim 84, wherein said grain is selected from the group consisting of full fat grains, full fat grain flour, full fat grain flakes, partially defatted grain flour,

partially defatted grain flakes, defatted grain flour, defatted grain flakes, refatted grain flour, refatted grain flakes, grain protein concentrate and mixtures thereof.

87. The product of claim 84, wherein said product remains stable for at least 6 months.

88. The product of claim 87, wherein said product remains stable for at least 1 year.

89. The product of claim 84, wherein said product has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

90. The product of claim 89, wherein said product has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

91. A process for preparing the grain fiber particulate of claim 76, wherein said process comprises:

(a) grinding grain seeds to yield a grain fiber particulate having a particle size in a range of about 0.01 microns to about 100 microns, wherein at least about 50% to about 100% of said grain fiber particulate has a size in a range of about 0.01 to about 35 microns;

(b) pasteurizing and/or sterilizing said grain fiber particulate; and

(c) homogenizing said grain fiber particulate to yield a grain fiber particulate.

92. The process of claim 91, wherein said grain is selected from the group consisting of flax, sunflower, rice, canola, corn, wheat, rapeseed, and lupin.

93. The process of claim 91, wherein said grain is selected from the group consisting of full fat grains, full fat grain flour, full fat grain flakes, partially defatted grain flour,

partially defatted grain flakes, defatted grain flour, defatted grain flakes, refatted grain flour, refatted grain flakes, grain protein concentrate and mixtures thereof.

94. The grain fiber particulate made by the process of any of claims 91-93.

95. A product comprising the grain fiber particulate of claim 94, wherein said product is selected from the group consisting of:

- (a) beverage;
- (b) dry mix;
- (c) milk product;
- (d) simulated milk product;
- (e) tofu;
- (f) miso;
- (g) topping;
- (h) infant food;
- (i) dessert;
- (j) snack;
- (k) flour product;
- (l) meat food product;
- (m) simulated meat food product; and
- (n) pet food product.

96. The product of claim 95, wherein said grain is selected from the group consisting of flax, sunflower, rice, canola, corn, wheat, rapeseed, and lupin.

97. The product of claim 95, wherein said grain is selected from the group consisting of full fat grains, full fat grain flour, full fat grain flakes, partially defatted grain flour,

partially defatted grain flakes, defatted grain flour, defatted grain flakes, refatted grain flour, refatted grain flakes, grain protein concentrate and mixtures thereof.

98. The product of claim 95, wherein said product remains stable for at least 6 months.

99. The product of claim 98, wherein said product remains stable for at least 1 year.

100. The product of claim 95, wherein said product has a sedimentation of less than about 5% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.

101. The product of claim 100, wherein said product has a sedimentation of about 0% by volume when centrifuged at a centrifugal force of at least 50 times the force due to the earth's gravity for 5 minutes.